SAMSUNG TECHWIN

NETWORK CAMERA

User Manual

SNV-5010

SAMSUNG

Network Camera
User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety, If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

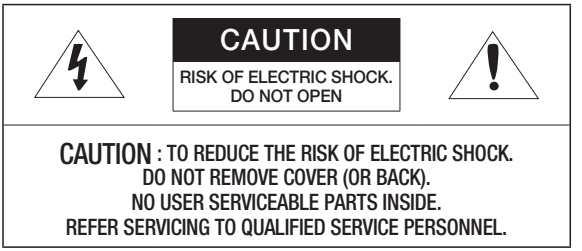
13. Unplug this apparatus during lighting storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PROCUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENNINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION


CAUTION
RISK OF ELECTRIC SHOCK.
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.

CAUTION

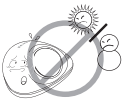
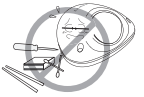
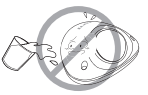
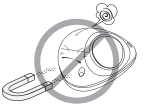
These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

The BNC output port is used to monitor the installation process of the network camera.
If you keep the BNC cable connected, a risk of lightening may cause damage or malfunction to the product.

Please use the input power with just one camera and other devices must not be connected.

overview

Please read the following recommend safety precautions carefully.

Do not Place this apparatus on an uneven surface. 	Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area. 
Do not place this apparatus near. 	Do not attempt to service this apparatus yourself.
Do not place a glass of water on the product. 	Do not install near any magnetic sources. 
Do not block any ventilation openings. 	Do not place heavy items on the product.

User's Manual is a guidance book how to use the products

The meaning of the using sign in the book is following

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction

※ Please read this manual for the safety before using of goods and keep it in the safe place.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Samsung Techwin cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products.
The Eco mark represents Samsung Techwin's devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

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PRODUCT FEATURES

- **HD Video Quality**
  Supports up to 1.3 mega pixels of HD video quality.
- **H.264/MPEG-4/MJPEG Multi-Streaming**
  This network camera supports the H.264/MPEG-4/MJPEG codec and can display videos in different resolutions and qualities simultaneously with different Codecs.

  ▪ However, MPEG4 video can not be played on a web page. Use CMS software if you want to play the video on a web page.
- **Support various communication protocols**
  Supports TCP/IP, UDP, RTP/RTSP, email, and FTP protocols as well as various internet protocols such as ARP, HTTP, HTTPS and DHCP.
- **Web Browser-based Monitoring**
  Using the Internet web browser to display the image in a local network environment.
- **Intelligent Video Analysis**
  Analyzes the event video according to the user-specified rules to recognize the event.
- **ONVIF (Spec 1.01) Compliance**
  This product supports ONVIF Core Spec. 1. 01.
  For more information, refer to www.onvif.org.

ONVIF
Driving network video through global standardization

RECOMENDED PC SPECIFICATIONS

- CPU : Intel(R) Core(TM)2 2.00 GHz or higher
- Operating System : Windows XP, VISTA, 7
  Mac OS
- Resolution : 1280X1024 pixels or higher
- RAM : 1GB or higher
- Web Browser : Internet Explorer 7.0 or higher
  Firefox, Google Chrome, Safari
- Video Memory : 128MB or higher

WHAT'S INCLUDED

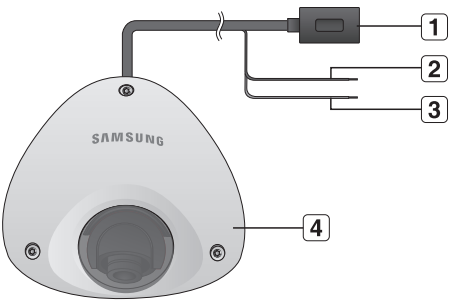
Please check if your camera and accessories are all included in the product package.

Appearance	Item Name	Quantity	Description
	User Manual, Installer S/W DVD, CMS S/W DVD	2	
	Quick Guide	1	
	Cable for the testing monitor	1	Used to test the camera connection to a portable display device
	L Wrench	1	Used to remove/fix the dome cover
	M4 Tapping Screw	3	Used for securing the camera to the wall or ceiling

- The Test Monitor Cable is connected to a portable displayer and used for testing the camera.

AT A GLANCE

Appearance

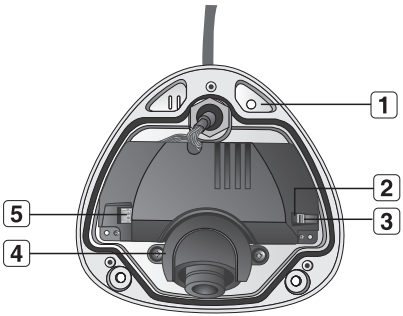


Item	Description
1 Network Port	Used to connect a PoE or LAN cable.
2 GND	Black : Wire for earth-grounding.
3 Power Cable	Red : Used for connection to the DC 12V adapter.
4 Dome Cover	Dome cover for the lens and unit protection.

- Wipe out a dirty surface of the lens softly with a lens tissue or cloth to which you have applied ethanol.
- This model does not support LED indication. Refer to the internal system indicators for operation-related information.

- Ensure that you can find a dehumidifier of Silica gel inside the cover when removing the cover. Otherwise, the product may get moist inside.
- If you find that the product gets moist due to a deteriorated dehumidifier of silica gel, contact us at the service center for technical assistance.

Inside



Item	Description
1 Fixing Hole	Used for securing the camera to the wall or ceiling.
2 System Indicator	ON : When the system operates normally OFF : If the system does not operate properly
3 Reset Button	Resets the camera settings to the default. Press and hold it for about 5 seconds to turn off the system indicator and restart the system. ! Resetting the camera IP address, subnet mask, gateway address etc. requires the use of the IP Installer software application.
4 Lens Cover	Used for protecting and fixing the lens.
5 Video Out Port	Video signal output port connected to the monitor.

INSTALLATION

Precautions before installation

Ensure you read out the following instructions before installing the camera:

- Select an installation site (ceiling or wall) that can endure at least 5 times of the camera weight.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.

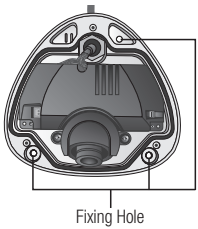
Disassembling

Using the L-wrench provided, loosen 3 screws by turning them counterclockwise and separate the dome cover.

- Note that it is not necessary to loosen the screw completely.

Installing the camera on the ceiling or a wall

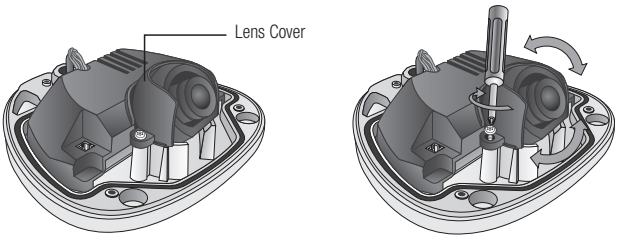
1. Select a location where you want to install the camera.
2. Insert the provided screw into the camera hole and turn it clockwise.



3. Close the dome cover and turn it clockwise using the L-wrench.

- If the cover is not fixed tightly, you may encounter a problem with waterproofing. (IP66)

Adjusting the monitoring direction for the camera



❖ **Adjusting the monitoring direction**

You can adjust the camera direction only when the camera is fixed on the ceiling. Then, turning the camera to the left or right is referred to as “Panning”, while tilting the angle is “Tilting”. For panning, the panning limit is 10° for the clockwise, and 10° for the counterclockwise, a total of 20° enabled; further rotation is stopped by the stopper.

- Adjust the panning angle so that the camera settles in the right horizontal position. You can adjust the panning up to 10° in each one direction, and 10° in the other direction, a total of 20°.
- Adjust the tilting angle so that the camera settles in the right vertical position. You can adjust the tilting between 0° and 90°.

❖ **Methods of adjustment**

1. Loosen the screws on either ends of the lens cover by turning them counter clockwise.

- The case of wall installation

① After mounting the camera on the wall, adjust the panning angle so that the camera faces a desired direction when tilting.

② Then, adjust the tilting angle so that the camera faces the monitoring direction.

- The case of ceiling installation

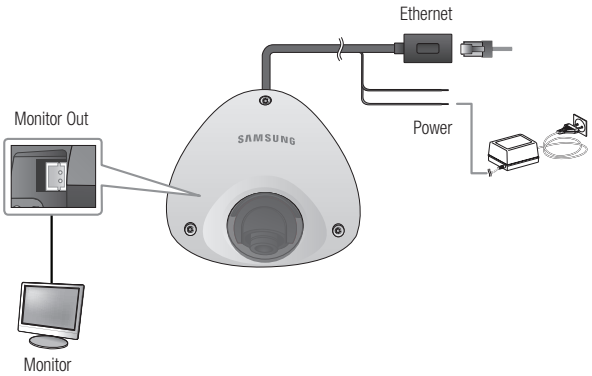
① After mounting the camera on the ceiling, adjust the panning angle according to the monitoring direction. You should adjust the panning angle lest that the video be displayed upside down on the monitor.

② Then, adjust the tilting angle so that the camera faces the monitoring direction.

2. When done, turn the screw clockwise to fix the tilted angle of the lens.

▪ For smoother Rotate adjustment, set the Tilt position between 60° ~ 80°.

CONNECTING WITH OTHER DEVICE



Connecting to the monitor

Connect the video out port of the camera to the video input port of the monitor.

- In the initial installation of the camera, you can connect the camera to the monitor for checking the connection status.
  You must set <**Video Output**> to <**ON**> before the display screen can be activated. (page 46)
- Connect the monitor test cable to the output port of the monitor.

Ethernet Connection

Connect the Ethernet cable to the local network or to the Internet.

Power Supply

Connect the +, - lines of the DC adaptor to the power terminal of the camera in the right polarity.

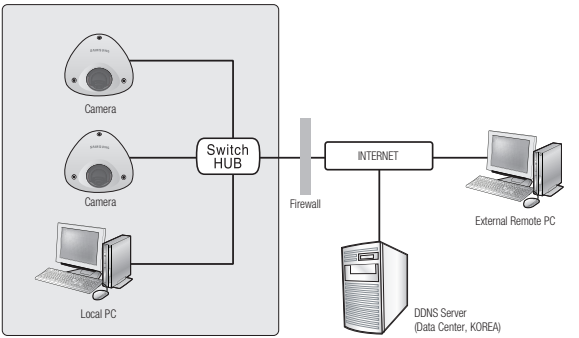
- Be careful not to reverse the polarity when you connect the power cable.
  You can also use a router featuring PoE (Power over Ethernet) to supply power to the camera.

You can set up the network settings according to your network configurations.

CONNECTING THE CAMERA DIRECTLY TO LOCAL AREA NETWORKING

Connecting to the camera from a local PC in the LAN

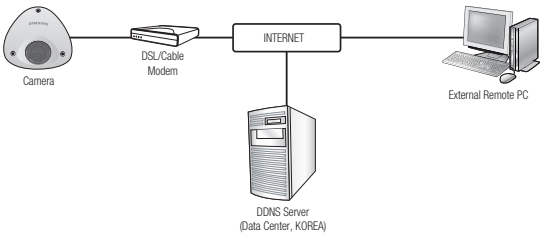
1. Launch an Internet browser on the local PC.
2. Enter the IP address of the camera in the address bar of the browser.



<Local Network>

- A remote PC in an external Internet out of the LAN network may not be able to connect to the camera installed in the intranet if the port-forwarding is not properly set or a firewall is set. In this case, to resolve the problem, contact your network administrator.
- The IP address is set to 192.168.1.100 when shipped by default. To change the IP address, use the IP Installer. For further details on IP Installer use, refer to "**Static IP Setup**". (Page 23)

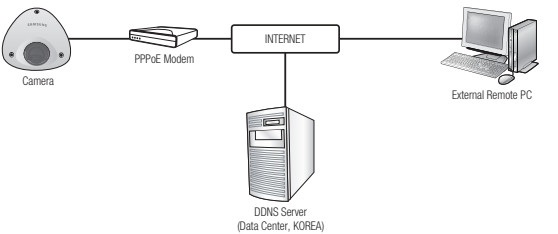
CONNECTING THE CAMERA DIRECTLY TO A DHCP BASED DSL/CABLE MODEM



1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the camera.
4. Move to [**Setup**] page.
5. Move to [**Network**] – [**DDNS**] and configure the DDNS settings.
6. Move to [**Network**] – [**Interface**], and set the network type to [**DHCP**].
7. Connect the camera, which was removed from your PC, directly to the modem.
8. Restart the camera.

- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 49)
- For configuring the DDNS settings, refer to "**DDNS**". (page 48)
- For setting the network type, refer to "**Interface**". (page 47)

CONNECTING THE CAMERA DIRECTLY TO A PPPOE MODEM

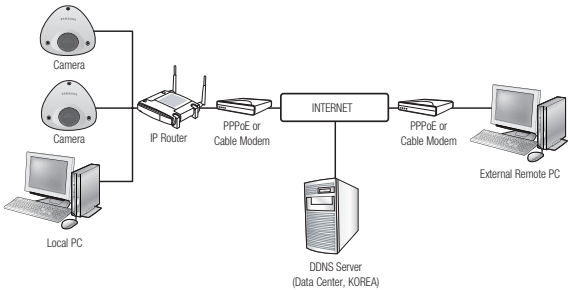


1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the camera.
4. Move to [**Setup**] page.
5. Move to [**Network**] – [**DDNS**] and configure the DDNS settings.
6. Move to [**Network**] – [**Interface**], and set the network type to [**PPPoE**].
7. Connect the camera, which was removed from your PC, directly to the modem.
8. Restart the camera.

- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 49)
- For configuring the DDNS settings, refer to "**DDNS**". (page 48)
- For setting the network type, refer to "**Interface**". (page 47)

CONNECTING THE CAMERA TO AN IP ROUTER WITH THE PPPOE/CABLE MODEM

This is for a small network environment such as homes, SOHO and ordinary shops.



Configuring the network settings of the local PC connected to an IP router

Configuring the network settings of the local PC connected to an IP router, follow the instructions below.

- Select : <**Network Neighborhood**> → <**Properties**> → <**Local Area Connection**> → <**Properties**> → <**General**> → <**Internet Protocol (TCP/IP)**> → <**Properties**> → <**Obtain an IP address automatically**> or <**Use the following IP address**>.
- Follow the instructions below if you select <**Use the following IP address**>:

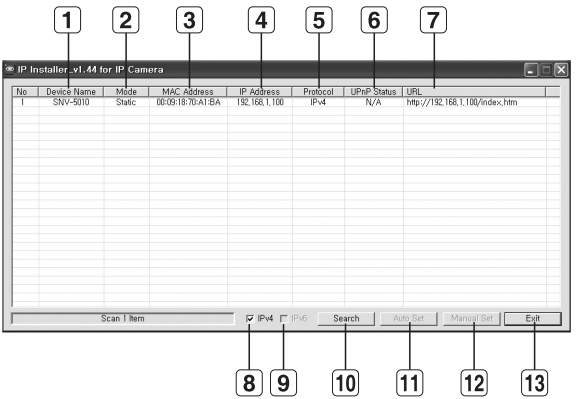
ex1) If the address (LAN IP) of the IP router is 192.168.1.1
IP address : 192.168.1.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.1

ex2) If the address (LAN IP) of the IP router is 192.168.0.1
IP address : 192.168.0.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.0.1

ex3) If the address (LAN IP) of the IP router is 192.168.xxx.1
IP address : 192.168.xxx.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.xxx.1

- For the address of the IP router, refer to the product's documentation.
- Refer to the "**Port Range Forward (Port Mapping) Setup**" section of the IP Router's documentation. (Page 27)

BUTTONS USED IN IP INSTALLER



Item	Description
1 **Device Name**	Model name of the connected camera. Click the column to sort the list by model name. However, search will be stopped if clicked during the search.
2 **Mode**	Displays either <**Static**> or <**Dynamic**> for the current network connection status.
3 **MAC(Ethernet) Address**	Ethernet address for the connected camera. Click the column to sort the list by Ethernet address. However, search will be stopped if clicked during the search.
4 **IP Address**	IP address. Click the column to sort the list by IP address. However, search will be stopped if clicked during the search. The factory default is "**192.168.1.100**".
5 **Protocol**	Network setting for the camera. The factory default is "IPv4". Cameras with the IPv6 setting will be displayed "IPv6".
6 **UPnP Status**	This function is not currently implemented.

Item	Description
7 URL	DDNS URL address enabling access from the external Internet. However, this will be replaced with the <**IP Address**> of the camera if DDNS registration has failed.
8 IPv4	Scans for cameras with the IPv4 setting.
9 IPv6	Scans for cameras with the IPv6 setting.
10 Search	Scans for cameras that are currently connected to the network. However, this button will be grayed out if neither IPv4 nor IPv6 is checked.
11 Auto Set	The IP Installer automatically configures the network settings.
12 Manual Set	You should configure the network settings manually.
13 Exit	Exits the IP Installer program.

▪ Use IP Installer version 1.44 or higher.

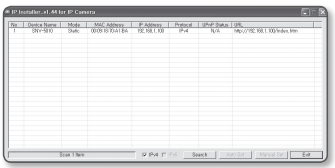
STATIC IP SETUP

Manual Network Setup

Run <**IP Installer_v1.44.exe**> to display the camera search list.
At the initial startup, both [**Auto Set**] and [**Manual Set**] will be grayed out.

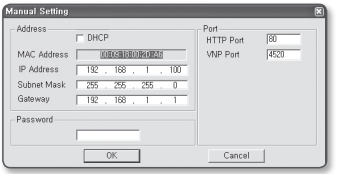
▪ For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

1. Select a camera in the search list.
   Find the MAC (Ethernet) address labeled on the rear of the camera.
   Both the [**Auto Set**] and [**Manual Set**] buttons will be activated.



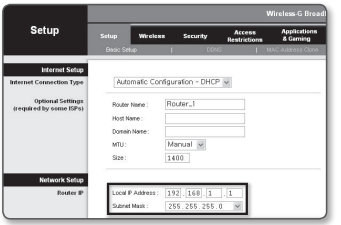
2. Click [**Manual Set**].
   The Manual Setting dialog appears.
   The default values of <**IP Address**>, <**Subnet Mask**>, <**Gateway**>, <**HTTP Port**> and <**VNP Port**> of the camera will be displayed.
   The default <**Password**> is "**4321**".

3. In the <**Address**> pane, provide the necessary information.
MAC (Ethernet) Address : The MAC (Ethernet) address of the applicable camera will be set automatically so you don't need to input it manually.



If using an IP router

- IP Address : Enter an address falling in the IP range provided by the IP router.
  ex) 192.168.1.2~254,
  192.168.0.2~254,
  192.168.XXX.2~254
- Subnet Mask : The <**Subnet Mask**> of the IP router will be the <**Subnet Mask**> of the camera.
- Gateway : The <**Local IP Address**> of the IP router will be the <**Gateway**> of the camera.

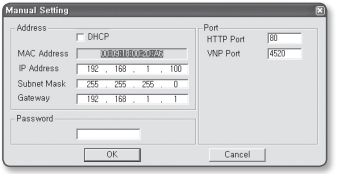


- The settings may differ depending on the connected IP router model.
  For more information, refer to the user manual of the applicable router.
- Refer to the "**Port Range Forward (Port Mapping) Setup**" section of the IP Router's documentation. (Page 27)

If not using an IP router

For setting <**IP Address**>, <**Subnet Mask**>, and <**Gateway**>, contact your network administrator.

4. In the <**Port**> pane, provide necessary information.
- HTTP Port : Used to access the camera using the Internet browser, defaulted to 80. Use the spin button to change the HTTP Port value.
- VNP Port : Used to control the video signal transfer, defaulted to 4520.



5. Enter the password.
This is the login password for the "**admin**" user who accesses the camera.
The default password is "**4321**".

6. Click [**OK**].
   Manual network setup will be completed.
7. When the manual setup including IP is completed, the camera will restart.

If the IP router has more than one camera connected

Configure the IP related settings and the Port related settings distinctly with each other.

Category		Camera #1	Camera #2
IP related settings	IP Address Subnet Mask Gateway	192.168.1.100 255.255.255.0 192.168.1.1	192.168.1.101 255.255.255.0 192.168.1.1
Port related settings	HTTP Port VNP Port	8080 4520	8081 4521

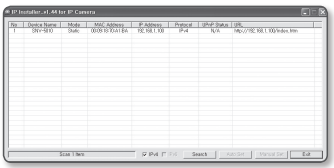
- If the <**HTTP Port**> is set other than 80, you must provide the <**Port**> number in the address bar of the Internet browser before you can access the camera.
  ex) http://IP address : HTTP Port
  http://192.168.1.100:8080

Auto Network Setup

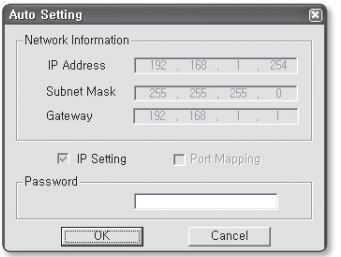
Run <**IP Installer_v1.44.exe**> to display the camera search list.
At the initial startup, both [**Auto Set**] and [**Manual Set**] will be grayed out.

- For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

1. Select a camera in the search list.
   Find the MAC (Ethernet) address labeled on the rear of the camera.
   Both the [**Auto Set**] and [**Manual Set**] buttons will be activated.
2. Click [**Auto Set**].
   The Auto Setting dialog appears.
   The <**IP Address**>, <**Subnet Mask**>, and <**Gateway**> will be set automatically.



3. Enter the password.
   This is the login password for the "**admin**" user who accesses the camera. The default password is "**4321**".
4. Click [**OK**].
   Auto network setup will be completed.
5. The camera will automatically complete the network setting and restart.



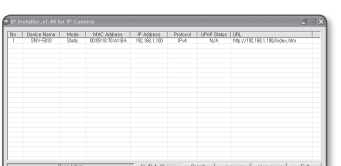
DYNAMIC IP SETUP

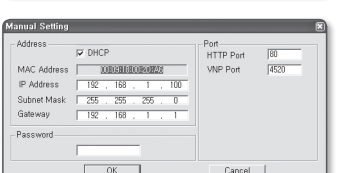
Dynamic IP Environment Setup

- Example of the Dynamic IP environment
  - If an IP router, with cameras connected, is assigned an IP address by the DHCP server
  - If connecting the camera directly to modem using the DHCP protocols
  - If IPs are assigned by the internal DHCP server via the LAN

Checking the Dynamic IP

1. Run the IP Installer on the user's local machine to display cameras allocated with <**Dynamic IP**> addresses in the list.
2. Select a camera in the list, and click [**Manual Set**] to check the <**Dynamic IP**> of the camera.
   If you uncheck <**DHCP**>, you can change IP or <**Port**> to <**Static**>.



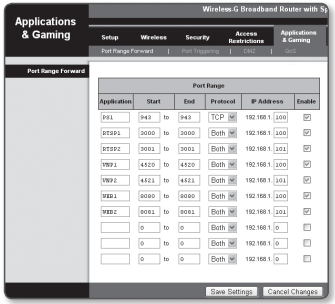


PORT RANGE FORWARD (PORT MAPPING) SETUP

If you have installed an IP router with a camera connected, you must set the port range forwarding on the IP router so that a remote PC can access the camera in it.

Manual Port Range Forwarding

1. From the Setup menu of the IP router, select <**Applications & Gaming**> - <**Port Range Forward**>.
   For setting the port range forward for a third-party IP router, refer to the user guide of that IP router.
2. Select <**TCP**> and <**UDP Port**> for each connected camera to the IP router.
   Each port number for the IP router should match that specified in <**Network**> - <**Port**> from the camera's Setup menu.
3. When done, click [**Save Settings**].
   Your settings will be saved.



- Above sample instructions are based on the CISCO's IP Router (Model: LINKSYS).
- The settings may differ depending on the connected IP router model.
  For more information, refer to the user manual of the applicable router.

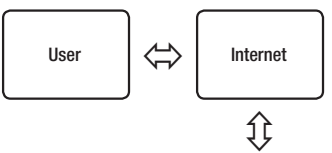
Setting up Port Range Forward for several network cameras

When several network camera connect to one IP router device, you should forward the TCP 943 port of the router to the TCP 943 port of a connected camera.

- If you don't set properly the TCP 943 port of the router, you cannot get any video stream from the web page of the camera.

- TCP 943 port is a port for the Silverlight policy server of a camera.

When Camera1 and Camera2 are connected to a router :



IP router			
Start	End	Protocol	IP Address
943	943	TCP	192.168.1.100
3000	3000	TCP/UDP	192.168.1.100
3001	3001	TCP/UDP	192.168.1.101
4520	4520	TCP/UDP	192.168.1.100
4521	4521	TCP/UDP	192.168.1.101
8080	8080	TCP/UDP	192.168.1.100
8081	8081	TCP/UDP	192.168.1.101

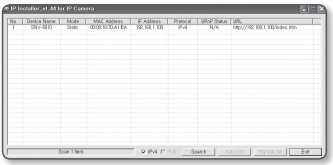
Camera1 (192.168.1.100)	
Web Server Port	8080
VNP Port	4520
RTSP Port	3000
Policy Server Port	943

Camera2 (192.168.1.101)	
Web Server Port	8081
VNP Port	4521
RTSP Port	3001
Policy Server Port	943

- You can set a rule of Port Forwarding on the IP router device through its configuration web page.
- You cannot change the Sliverlight policy server port of a camera. This value is fixed internally.
- You can change the ports of the camera except the policy server port through its configuration web pages.

CONNECTING TO THE CAMERA FROM A SHARED LOCAL PC

1. Run the IP Installer.
   It will scan for connected cameras and display a list of them.
2. Double-click a camera to access.
   The Internet browser starts and connects to the camera.



- Access to the camera can also be gained by typing the camera's IP address in the address bar of the Internet browser.

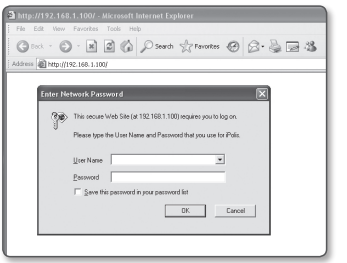
CONNECTING TO THE CAMERA FROM A REMOTE PC VIA THE INTERNET

Since using the IP Installer on a remote computer that is not in the IP Router's network cluster is not allowed, users can access cameras within an IP Router's network by using the camera's DDNS URL.

1. Before you can access a camera in the IP router network, you should have set the port range forward for the IP router.
2. From the remote PC, launch the Internet browser and type the DDNS URL address of the camera, or the IP address of the IP router in the address bar.
   ex) http://www.samsungipolis.com/[Product ID]

CONNECTING TO THE CAMERA

Normally, you would


http://192.168.1.100/ - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.1.100/
Enter Network Password
This secure Web Site (at 192.168.1.100) requires you to log on.
Please type the User Name and Password that you use for Polis.
User Name
Password
Save this password in your password list
OK
Cancel

1. Launch the Internet browser.
2. Type the IP address of the camera in the address bar.
   ex) • IP address (IPv4) : 192.168.1.100
   → http://192.168.1.100
   - the Login dialog should appear.
   • IP address (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111
   → http://[2001:230:abcd:ffff:0000:0000:ffff:1111]

If the HTTP port is other than 80

1. Launch the Internet browser.
2. Type the IP address and HTTP port number of the camera in the address bar.
   ex) IP address : 192.168.1.100:HTTP Port number(8080)
   → http://192.168.1.100:8080 - the Login dialog should appear.

Using URL

1. Launch the Internet browser.
2. Type the DDNS URL of the camera in the address bar.
   ex) URL address : http://www.samsungipolis.com/[Product ID]
   - the Login dialog should appear.

To check the DDNS address

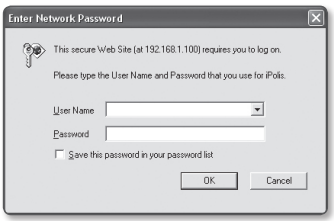
If the camera is connected directly to the DHCP cable modem, DSL modem, or PPPoE modem, the IP address of your network will be changed each time you try to connect to the ISP (Internet Service Provider) server.
If this is the case, you will not be informed of the IP address changed by DDNS.

Once you register a dynamic IP-based device with the DDNS server, you can easily check the changed IP when you try to access the device.
To add the IP address to the <**DDNS**> server, visit www.samsungipolis.com and register your device, and set the DDNS option to <**Samsung DDNS**> before providing the host name for the DDNS server.

LOGIN

The default user ID is "**admin**", and the default password is "**4321**".

1. Enter "**admin**" in the <**User Name**> input box.
2. Enter "**4321**" in the <**Password**> input box.
   If the password is changed, enter the changed password instead.
3. Click [**OK**].
   If you have logged in successfully, you will the Live Viewer screen.


Enter Network Password
This secure Web Site (at 192.168.1.100) requires you to log on.
Please type the User Name and Password that you use for iPolis.
User Name
Password
Save this password in your password list
OK
Cancel

- For security purposes, ensure that you change the password in <**System**> - <**User**>. The administrator ID, "**admin**", is fixed and can not be changed.
- If you check the "**Save this password in your password list**" option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.

- If you are using Internet Explorer 7.0 or 8.0 as the default web browser, you can view the best quality image with a screen ratio of 100%. Reducing the ratio may cut the image on the borders.

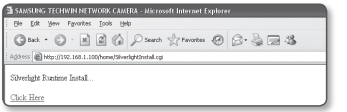
web viewer

This network camera uses Microsoft Silverlight for displaying the video.

INSTALLING SILVERLIGHT RUNTIME

If your PC has not installed Silverlight Runtime or has just installed an old runtime version, you will be redirected to the Silverlight Runtime installation page automatically when accessing the web viewer.

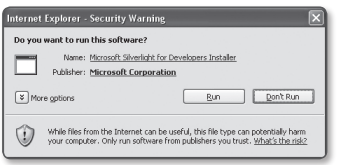
1. Click <**Click Here**>.


SAMSUNG TECHWIN NETWORK CAMERA - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://192.168.1.100/home/SilverlightInstall.cgi
Silverlight Runtime Install...
Click Here

2. When the file download dialog pops up, click <**Run**>.

File Download - Security Warning
Do you want to run or save this file?
Name: Silverlight_Developer.exe
Type: Application, 7,63 MB
From: 192.168.1.100
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

3. When the download is completed, click <**Run**>.


Internet Explorer - Security Warning
Do you want to run this software?
Name: Microsoft Silverlight for Developers Installer
Publisher: Microsoft Corporation
More options
Run
Don't Run
While files from the Internet can be useful, this file type can potentially harm your computer. Only run software from publishers you trust. What's the risk?

4. The Silverlight Runtime installation page will be displayed. <**Install now**> to proceed with the installation.

5. When done, click <**Close**>.

6. Close and restart the web browser, and try to access the Web Viewer.
When Siverlight Runtime is properly installed, you will see the Live screen.

- For normal installation, set the Block Popup setting as follows:
  Internet Explorer → Tools → Block Popup → Always allow popups from the current site(A)
- However, MAC OS X users who are not connected to the Internet can use the provided installation DVD to install Silverlight Runtime (Run the executable “Silverlight_xxx.dmg” in the DVD. You will be guided through installation of the software).

USING THE LIVE SCREEN

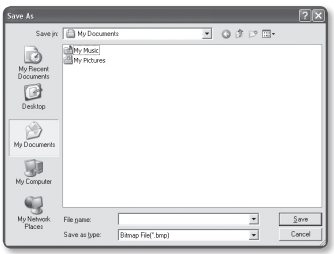
Item	Description
1 **Monitoring**	Move to the monitoring screen.
2 **Setup**	Move to the Setup screen.
3 **Viewer Screen**	Displays the Live video on the screen.
4 **Reset Event**	Reset the event settings to the default.
5 **Camera Menu**	Used to retrieve and customize the Camera Setup menu. For selecting and saving each menu item, refer to "**Using the Camera Menu**". (page 36)
6 **Digital PTZ**	You can use the mouse wheel to activate the digital zooming.
7 **Screen Optimization, Full Screen**	Adjust the screen to the optimal size, and display the Full Screen icon on the Live screen.
8 **Capture**	Saves the snapshot as an image file in the .bmp format.

Item	Description
9 Video Format	You can select a profile type in <**Video Profile**> under the <**Video**> setup menu. For IE 6.0 users, press the Browse button next to the <**Video Profile**> dialog and select a profile type again if the selected profile is not played. If the "Invalid codec" message is displayed, select a profile type from the profile list again.

- If the temperature drops below the operational range, video signal may not be produced. In such cases, please wait for the video.

To capture the snapshot

1. Click [ ] on the scene to capture.
   The Capture dialog should appear.
2. Click [**Save**] button.
   The screenshot will be saved in the specified path.



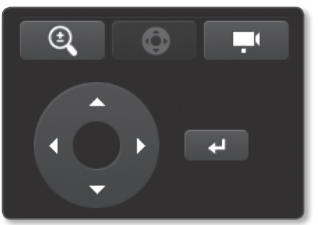
- If you are using the IE8 as the default web browser, select "**Tools-Internet Options-Security**" and uncheck "**Use protected mode**".

To fit the full screen

1. Click the [**Full Screen ( )**] button.
   The corresponding button will be displayed in the Viewer.
2. Click the button.
   This will fit the Viewer to the full screen.
3. To exit the full screen mode, press [**Esc**] on the keyboard.

USING THE CAMERA MENU

Follow the steps below if you run the Web Viewer for setting the menus.



1. Launch the Web Viewer.
2. Click [**Camera Menu (**)] in the left corner of the Live screen.
   The camera setup menu appears.
3. Use the Up/Down (▲/▼) buttons to move to a desired item.
4. To change the value of a selected item, use the Left/Right (◄/►) buttons.
   To break down to a sub-menu structure, click [**Enter (**)] on the selected item.

⏎ : This arrow appears next to a menu that contains sub items.

- If <**IV analysis function**> is enabled, camera's OSD menu operation can be set as an event.

CAMERA MENU SETUP

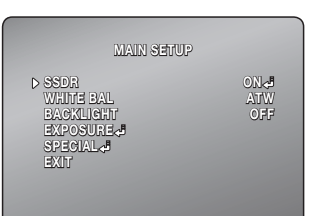
You can change the camera settings according to the environment where the camera is located.

SSDR (Samsung Super Dynamic Range) Setup

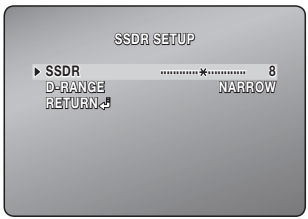
In a scene where the difference between bright and dark is severe, you can increase the brightness of the dark area alone to regulate the overall brightness.

▲/▼ ⇨ ◄/► ⇨ ENTER ⇨ ▲/▼ ⇨ ◄/► ⇨ ENTER

1. Move to <**SSDR**> and select <**ON**>.



2. Configure the <**SSDR**> and <**D-RANGE**> settings as necessary.
   - SSDR : Adjust the level of the dynamic range.
   - D-RANGE : Select the amplitude area of the dynamic range.
3. When completed, select <**RETURN**> to return to the previous screen.

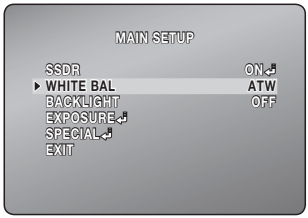


White Balance Setup

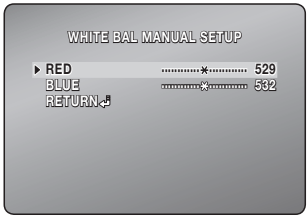
You can correct the image colors based on white under any lighting conditions.

▲/▼ ⇨ ◄/► ⇨ ENTER ⇨ ▲/▼ ⇨ ◄/► ⇨ ENTER

1. Move to <**WHITE BAL**> and select a setting value.
   - ATW : Corrects the colors of the camera video automatically.
   - MANUAL : You can adjust the red and blue gains of the camera video manually.
   - AWC → SET : Corrects the colors of the camera video to be optimized to the current lighting condition and screen mode.
     You may need readjustment if the lighting condition is changed.
     Put the focus of the camera to a white paper and press the [**Enter (** ↵ **)**] button.
   - OUTDOOR : Automatically corrects the video colors of the camera to be optimized to the outdoor environment.
   - INDOOR : Automatically corrects the video colors of the camera to be optimized to the indoor environment.



2. To adjust it manually, select <**MANUAL**>.
3. Specify the <**RED**> and <**BLUE**> values as necessary.
4. When completed, select <**RETURN**> to return to the previous screen.

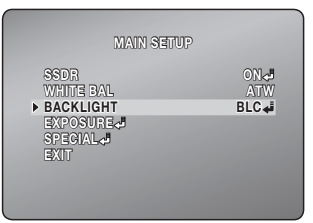


Custom Backlight Setup

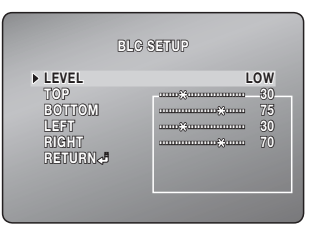
You can specify a desired area on the video manually and set the area to be displayed more clearly.

▲/▼ ⇨ ◄/► ⇨ ENTER ⇨ ▲/▼/◄/► ⇨ ENTER

1. Move to <**BACKLIGHT**>.
2. Select <**BLC**>.



3. Set the BLC <**LEVEL**>.
   You can change the level to adjust the brightness of the monitoring area.
4. Set the <**TOP, BOTTOM, LEFT, RIGHT**> levels to specify the target area.
5. When completed, select <**RETURN**> to return to the previous screen.

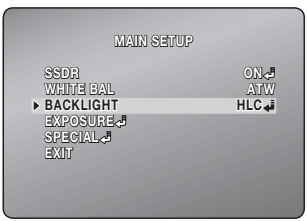


HLC (Highlight Compensation) Setup

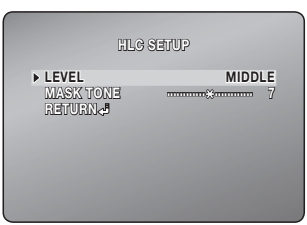
When a strong light such as streetlamp or headlight faces forward to the camera, you can mask that exposed area in order to protect it from being saturated.

▲/▼ ⇨ ◄/► ⇨ ENTER ⇨ ▲/▼ ⇨ ◄/► ⇨ ENTER

1. Select <**BACKLIGHT**>.
2. Select <**HLC**>.



3. Set the <**LEVEL**> and the <**MASK TONE**>.
   - LEVEL : Adjust the brightness level so as to remove the incoming highlight from a specific condition.
   - MASK TONE : Adjust the mask tone of the highlighted area.
4. When completed, select <**RETURN**> to return to the previous screen.



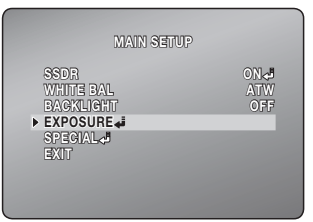
- At night operation, this function will be activated only if the incoming highlight exceeds a certain area in a low contrast environment.
- At night, HLC will not function if the scene is either too bright or too dark.

Exposure Setup

You can adjust the exposure level of the camera.

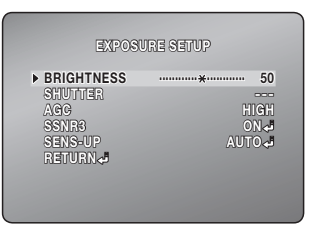
▲/▼ ⇨ ENTER ⇨ ▲/▼/◄/► ⇨ ENTER ⇨ ▲/▼/◄/► ⇨ ENTER

1. Move to <**EXPOSURE**> and select a setting value.

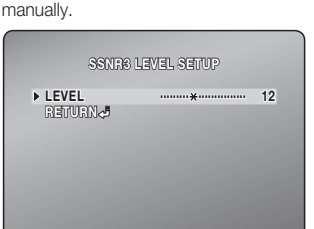


2. Select each item and set it appropriately.

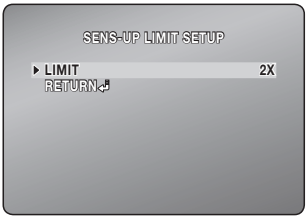
- BRIGHTNESS : Adjust the screen brightness.
- SHUTTER : Adjust the electronic shutter of the camera.
  - MANUAL : Adjust the shutter speed of the camera manually.
  - A.FLK : This will prevent the screen from flickering.



- AGC : Specify how to adjust the level according to the luminance.
  - MANUAL : Adjust the screen brightness manually.
- SSNR3 : Adjust the noise reduction level.



- SENS-UP : Automatically senses the darkness level at night or in a low contrast scene and extends the accumulation time accordingly for a bright and sharp image.
  - If you set the shutter mode to MANUAL/ FLICKERLESS, SENS-UP mode will be deactivated.
  - The greater the video accumulation factor is, the brighter the screen is but the afterimage of a moving object grows accordingly.



- LIMIT : Set the work condition to Auto mode in a low contrast scene.

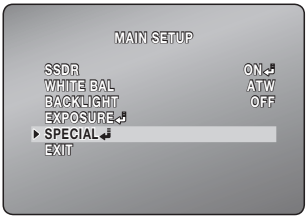
3. When completed, select <**RETURN**> to return to the previous screen.

Screen Display Setup

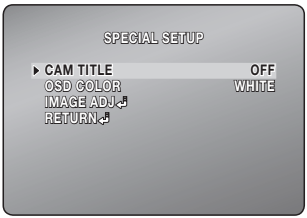
You can specify the camera title and the OSD color that will be displayed on the screen.

▲/▼ ⇨ ◄/► ⇨ ENTER ⇨ ▲/▼ ⇨ ◄/► ⇨ ENTER

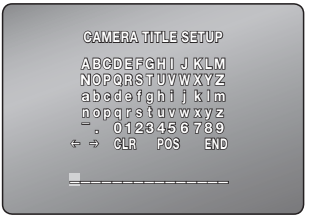
1. Select <**SPECIAL**>.



2. Select <**CAM TITLE**>.



3. Use alphanumeric characters in the list and enter a desired title in the bottom input line.
   - You can enter up to 15 characters for the title.
4. Select <**POS**> and specify where to display the camera title.
   When the camera title is displayed, use the direction buttons to specify the position; Click OK to return to the previous menu.



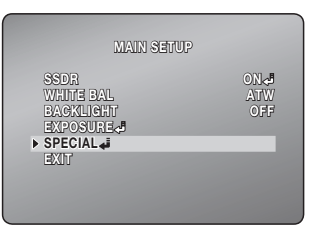
5. When done, select <**END**>.
   To cancel your input, select <**CLR**>.
6. When completed, select <**RETURN**> to return to the previous screen.

OSD Color Setup

You can set the OSD color on the screen to your preference.

▲/▼ ⇨ ENTER ⇨ ▲/▼ ⇨ ◄/► ⇨ ENTER

1. Select <**SPECIAL**>.



2. Move to <**OSD COLOR**> and select a desired color.
3. When completed, select <**RETURN**> to return to the previous screen.

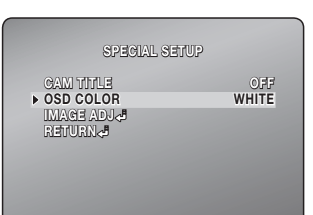
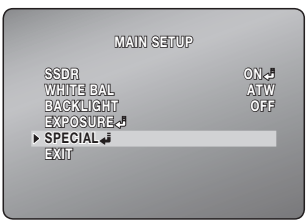


Image Adjustment

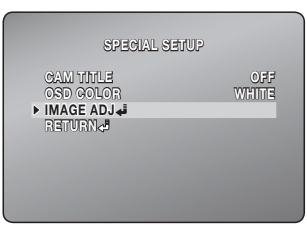
You can configure the sharpness, gamma level, and color settings of an image to your preference.

▲/▼ ⇨ ◄/► ⇨ ENTER ⇨ ▲/▼ ⇨ ◄/► ⇨ ENTER

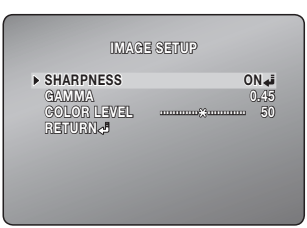
1. Select <**SPECIAL**>.



2. Select <**IMAGE ADJ**>.



3. Select each item and set it appropriately. If selecting <**SHARPNESS**>, you can adjust the sharpness of the image.
   - SHARPNESS : Adjust the overall sharpness of the image.
     The higher the level is, the sharper and clearer the outline of the image becomes.
   - GAMMA : Adjust the contrast of the image.
   - COLOR LEVEL : Adjust the color level of the image.



4. When completed, select <**RETURN**> to return to the previous screen.

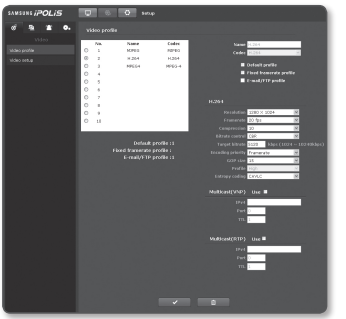
SETUP

You can configure the video, network, event and system settings of the camera in the network.

1. In the Live screen, click [**Setup (** ☼ **)**].
2. The Setup screen appears.

VIDEO SETUP

Video Profile



1. From the Setup menu, select the <**Video (** ◉ **)**> tab.
2. Click <**Video profile**>.
3. Select a <**Video profile**> number.
4. Click the input box of each item and enter / select a desired value.
   - The context menu may differ depending on the selected codec type.

   - Default profile : This is the default video profile.
   - Fixed framerate profile : Fix the frame rate of the selected profile regardless of the settings of other profiles.
   - E-mail/FTP profile : Video profile to be transferred to the specified email or FTP site.
     - Only the MJPEG codec can be set as the E-mail/FTP Profile.
5. When done, click [**Apply (** ✓ **)**].

To add a video profile

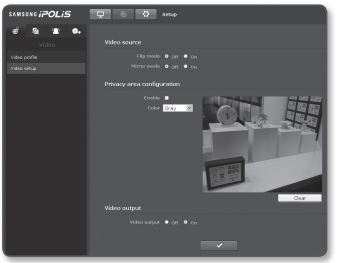
You can add as many codecs as necessary so that a variety of profiles can be applied according to the recording condition.

1. Select a profile number.
2. Provide the name and select a codec.
3. Specify the conditions under which the codec will be applied.
4. Specify the details of the selected codec including resolution and frame rate.
   - Resolution : Set the video size of the MPEG4, H.264, and MJPEG files.
   - Framerate : Specify the frame rate.
   - Compression : Specify the compression rate of the video.
   - Bitrate control : You can select one from constant bit rate and variable bit rate for compression. Constant bit rate (CBR) varies the video quality and fixes network transfer bit rate, while variable bit rate emphasizes the quality by varying network transfer bit rate.
     - If you set the resolution to 1280X1024, the maximum frame rate is 22 fps.
   - Target bitrate : Specify the bit rate at which you will transfer the video.
   - Encoding priority : You can set the video transfer method to Framerate or Compression.
   - GOP size : Select a GOP size between 1 and 15.
   - Profile : The H.264 profiling method is fixed to <**High**>.
   - Entropy coding : Reduce the possible compression loss due to encoding.
   - Multicast (VNP) : Specify the use of the VNP protocol.
     - IPv4 : Enter an IPv4 address with which you can connect to the IPv4 network.
     - Port : Specify the video communication port.
     - TTL : Set the TTL for the VNP packet.
   - Multicast (RTP) : Specify the use of the RTP protocol.
     - IPv4 : Enter an IPv4 address with which you can connect to the IPv4 network.
     - Port : Specify the video communication port.
     - TTL : You can set the TTL for the RTP packet.

What is GOP size?

GOP (Group of Pictures) is a set of video frames for MPEG4 and H.264 format compression, indicating a collection of frames from the initial I-Frame (key frame) to the next I-Frame. GOP consists of 2 kinds of frames: I-Frame and P-Frame.
I-Frame is the basic frame for the compression, also known as Key Frame, which contains one complete image data. P-Frame contains only the data that has changed from the preceding I-Frame.
You can set between 1 and 15 for the MPEG4 and H.264 CODEC.

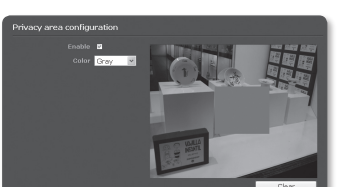
Video Setup



1. From the Setup menu, select the <**Video (**)> tab.
2. Click <**Video setup**>.
3. Select a <**Video source**> mode.
   - Flip mode : Turn upside down the image that is captured by the camera.
   - Mirror mode : Flip horizontal the image that is captured by the camera.
4. Select to enable <**Privacy area configuration**>.
5. Set the <**Video output**>.
   - If you select <**Off**>, the video signal will not be output via the VIDEO OUT port.
6. When done, click [**Apply (**)].

To set the privacy zone

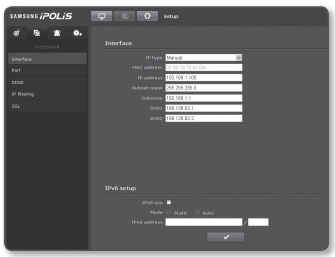
You can specify a certain area of the camera video to be protected for your privacy.



1. Set it to <**Enable**>.
2. Place the cursor at a point in the video and drag it to whatever you need.
3. Specify the <**Color**> that will fill the privacy area.
4. To cancel your selection, simply click [**Clear**].
5. When done, click [**Apply (**)].
   - You can set up to 12 privacy zones.

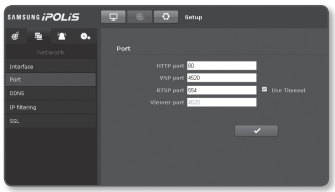
NETWORK SETUP

Interface



1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**Interface**>.
3. Set the <**Interface**> and <**IPv6 setup**> as necessary.
   - IP type : Select an IP connection type.
     - Manual : Specify the IP address, Subnet Mask, Gateway, DNS1, and DNS2.
     - DHCP : Specify the DNS1 and DNS2.
     - PPPoE : Specify the DNS1, DNS2, ID and password.
     - If you set it to <**Manual**>, you should specify the IP, Subnet Mask, Gateway, DNS 1 & 2 manually.
   - MAC address : Shows the MAC address.
   - IP address : Displays the current IP address.
   - Subnet mask : Displays the <**Subnet mask**> for the set IP.
   - Gateway : Displays the <**Gateway**> for the set IP.
   - DNS1/DNS2 : Displays the DNS(Domain Name Service) server address.
   - IPv6 use : Specify the use of IPv6.
   - IPv6 address : Obtains the IPv6 address to access the IPv6 network.
4. When done, click [**Apply (** **)**].

Port



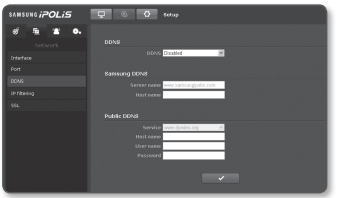
1. From the Setup menu, select the <**Network (** **)**> tab.
2. Select <**Port**>.
3. Type in each item in the Port menu as necessary.
   - Neither the port range between 0 and 1023 nor port 3702 is available.

- HTTP port : HTTP port used to access the camera via the web browser. The default is 80(TCP).
- VNP port : Set a port used to transfer video signals with the Samsung protocols.
- RTSP port : Used to transfer videos in the RTSP mode; the default is 554.
- Viewer port : Used to transfer videos to the Web Viewer; the default is 4520.
  - The port range of the Viewer is between 4502 and 4534. If the VNP port is with this effective range, the Viewer port should be specified the same as the VNP port.

4. When done, click [**Apply (** ✓ **)**].

DDNS

DDNS is an abbreviation of Dynamic Domain Name Service that converts the IP address of a camera into a general Host Name so that the user can easily remember it.

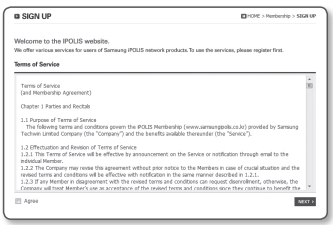


1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**DDNS**>.
3. Select <**DDNS**>.
4. Type in the DDNS items according to the selected type.
   - Samsung DDNS : Select this if you use the DDNS server provided by Samsung Techwin.
   - Public DDNS : Select one of provided public DDNS servers when you use a public DDNS server.
     - Host name : Enter the name of the host (i.e., host name of Dyndns) that is registered with the DDNS server.
     - User name : Enter the user name for the DDNS service. (i.e., user ID that is registered with Dyndns)
     - Password : Enter the password for the DDNS service. (i.e., password that is registered with Dyndns)
5. When done, click [**Apply (** ✓ **)**].

Registering with DDNS

To register your product with the Samsung DDNS

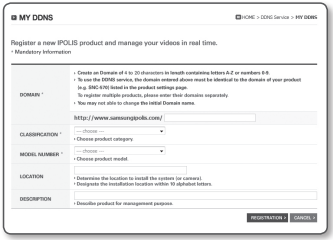
1. Visit the iPOLiS web site(www.samsungipolis.com) and sign in with a registered account.


SIGN UP
HOME > Membership > SIGN UP
Welcome to the IPOLIS website.
We offer various services for users of Samsung IPOLIS network products.To use the services, please register first.
Terms of Service
Terms of Service
(and Membership Agreement)
Chapter I Parties and Recitals
1.1 Purpose of Terms of Service
The following terms and conditions govern the IPOLIS Membership (www.samsungipolis.co.kr) provided by Samsung Techwin Limited Company (the "Company") and the benefits available thereunder (the "Service").
1.2 Effectuation and Revision of Terms of Service
1.2.1 The Terms of Service will be effective by announcement on the Service or notification through email to the individual Member.
1.2.2 The Company may revise this agreement without prior notice to the Members in case of crucial situation and the revised terms and conditions will be effective with notification in the same manner described in 1.2.1.
1.2.3 If any Member in disagreement with the revised terms and conditions can request disenrollment, otherwise, the Company will treat Member's use as acceptance of the revised terms and conditions once they continue to benefit the
Agree
NEXT

2. From the top menu bar, select <**DDNS SERVICE**>-<**MY DDNS**>.

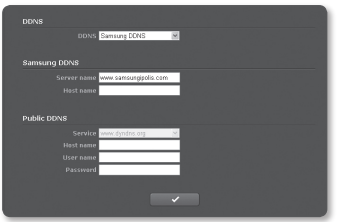
3. Click [**PRODUCT REGISTRATION**].
4. Enter the product domain.
   - You must perform the duplicate check for the domain that you entered.

5. Select a <**CLASSIFICATION**> and specify the <**MODEL NUMBER**>.
6. Specify the product location with a description if necessary.
7. Click [**REGISTRATION**].
   The product will be added to the product list that you can check.


MY DDNS
HOME > DDNS Service > MY DDNS
Register a new IPOLIS product and manage your videos in real time.
* Mandatory Information
DOMAIN *
Create an Domain of 4 to 20 characters in length containing letters A-Z or numbers 0-9.
To use the DDNS service, the domain entered above must be identical to the domain of your product (e.g. SNC-570) listed in the product settings page.
To register multiple products, please enter their domains separately.
You may not able to change the initial Domain name.
http://www.samsungipolis.com/
CLASSIFICATION *
--- choose ---
Choose product category.
MODEL NUMBER *
--- choose ---
Choose product model.
LOCATION
Determine the location to install the system (or camera).
Designate the installation location within 10 alphabet letters.
DESCRIPTION
Describe product for management purposes.
REGISTRATION
CANCEL

To connect to the Samsung DDNS in camera setup

1. From the DDNS setup page, set <**DDNS**> to <**Samsung DDNS**>.
2. Provide the <**Host name**> that you registered product domain with the DDNS site.
3. Click [**Apply (** ✓ **)**].
   When the connection is successfully made, you will see the message of <**(Success)**> on the screen.



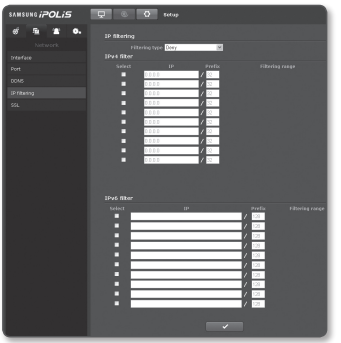
Configuring public DDNS in Camera Settings

1. Open the DDNS settings page and select <**Public DDNS**> for <**DDNS**>.
2. Enter the corresponding site's host name, user name and password.
3. Click [**Apply (** ✓ **)**] button.
   If the connection properly establishes, <**(Success)**> appears.

IP Filtering

You can create a list of IPs that you want to grant or deny access to them.

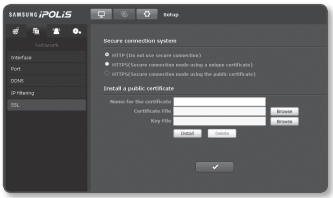
1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**IP filtering**>.
3. Select a <**Filtering type**>.
   - Deny : If selecting this, access from those IPs that are added to the filtering will be restricted.
   - Allow : If selecting this, access from only those IPs that are added to the filtering will be accepted.
4. Provide the IP that you want to grant or deny access from.
5. When done, click [**Apply (** ✓ **)**].



SSL

You can select a secure connection system or install the public certificate for this purpose.

1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**SSL**>.
3. Select a secure connection system.
   - To access the camera using HTTPS mode, you have to type the IP address for the camera in the form of "https://<Camera_IP>".



4. Search for the public certificate that you want to install on the camera.
   To install the certificate on the camera, you need to provide a certificate name (it can be arbitrarily assigned by the user), certificate file issued from the certification authority and a key file.
   - The <**HTTPS(Secure connection mode using the public certificate)**> item will be active only if there exists a public certificate installed.
5. When done, click [**Apply (** **)**].

Installing the certificate

1. Enter the certificate name.
2. Select the certificate file to be installed and certificate key, and click [**Install (** Install **)**] button.

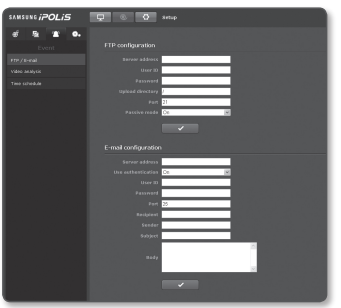
Deleting the certificate

1. Click [**Delete (** Delete **)**] button.

EVENT SETUP

FTP/E-mail

You can configure the FTP/E-mail server settings so that you can transfer the images stored in the camera to your PC if an event occurs.

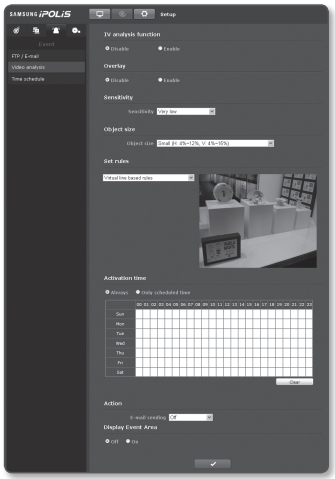


1. From the Setup menu, select the <**Event (** **)**> tab.
2. Click <**FTP / E-mail**>.
3. Select <**FTP configuration**> or <**E-mail configuration**> and enter / select a desired value.
   - FTP configuration
     - Server address : Enter the IP address of the FTP server that you transfer the event images to.
     - User ID : Enter the user ID with which you will log in to the FTP server.
     - Password : Enter the user account password for logging into the FTP server.
     - Upload directory : Specify the FTP path where you will transfer the event images.
     - Port : The default port of the FTP server is 21; however, you can use a different port number according to the FTP server settings.
     - Passive mode : Select <**On**> if you need to connect in passive mode due to the firewall or the FTP server settings.
   - E-mail configuration
     - Server address : Enter the IP address of the email server that you use for the email transfer.
       ex) SMTP. hotmail. com
     - Use authentication : Select whether to use authorization.
     - User ID : Enter the user ID for logging into the email server.
     - Password : Enter the user account password for logging into the email server.
     - Port : The default port of the email server is 25; however, you can use a different port number according to the email server settings.
     - Recipient : Enter the address of the email recipient.
     - Sender : Enter the address of the email sender. If the sender address is incorrect, the email from the sender may be classified as SPAM by the email server and thus may not be sent.

- Subject : Enter a subject for your email.
- Body : Provide the text for the massage. Attach the event images to the email that you are preparing.

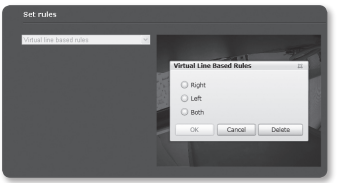
4. When done, click [**Apply ( )**].

Video analysis



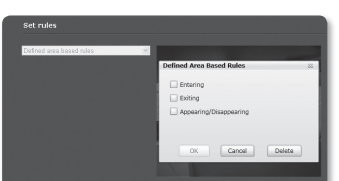
1. From the Setup menu, select the <**Event ( )**> tab.
2. Click <**Video analysis**>.
3. Specify the use of Intelligent Video Analysis.
4. Specify the use of overlay.
   If you set it to Enable, the event rules will be shown on the screen.
5. Select a sensitivity level at which the camera detects the object.
6. Specify the object size.
7. Select an event rule.
   - You can select a total of 3 rules including the virtual line and the specified area.
8. Specify the <**Activation time**>.
   - Always : Always check if an event occurs. It activates in operated mode when the event occurs.
   - Only scheduled time : Check if an event occurs at a specified day of the week for a specified time period. It activates in operated mode when the event occurs.
9. Specify an operation that will perform if an event occurs.
   - E-mail sending : Specify the use of email transfer if an event occurs.
10. Specify whether or not the event area is marked.
    - If you set it to <**On**>, the suspect area where the event occurs will be marked in a red box.

To use the IV analysis function according to the virtual line based rule



1. Set <**IV analysis function**> to <**Enable**>.
2. Set the event rule to <**Virtual line based rules**>.
3. Click a desired point in the video and drag it to the end point. Then, the popup window appears.
4. Select a desired <**Virtual Line Based Rules**>.
   - You can specify up to 3 event rules for the virtual line.
   - Right : A movement from left to right in the virtual line will be detected.
   - Left : A movement from right to left in the virtual line will be detected.
   - Both : A movement in any direction in the virtual line will be detected.
5. Click [**OK**].
   To cancel the existing line, right-click on the line and select [**Delete**] in the context menu.
6. When done, click [**Apply (** **)**].

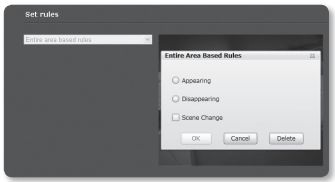
To use the IV analysis function according to the defined area based rule



1. Set <**IV analysis function**> to <**Enable**>.
2. Set the event rule to <**Defined area based rules**>.
3. Click a corner point of a desired area in the video to display the popup window.
4. Select a desired <**Defined Area Based Rules**>.
   - You can specify up to 3 defined area event rules.
   - Entering : An event where a moving object passes through the defined area and enters inside will be detected.
   - Exiting : An event where a moving object passes through the defined area and exits outside will be detected.
   - Appearing/Disappearing : An event will be detected where an object that has not existed in the area until the previous frame, suddenly appears or disappears in the area without passing through the defined area.

5. Click [**OK**].
   To cancel the specified area, right-click on the area and select [**Delete**] in the context menu.
6. When done, click [**Apply (** ✓ **)**].

To use the IV analysis function according to the whole area based rule

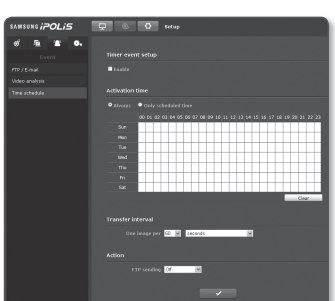


1. Set <**IV analysis function**> to <**Enable**>.
2. If you set the event rule to <**Entire area based rules**>, this will display the popup window.
3. Select a desired <**Entire Area Based Rules**>.
   - Appearing : An event where an object that has not existed suddenly appears will be detected.
   - Disappearing : An event where an object that has existed suddenly disappears will be detected.
   - Scene Change : An event where the screen is changed at more than a certain time interval will be detected.
     - You can set the <**Scene Change**> rule along with rules : <**Appearing**> and <**Disappearing**>.
4. Click [**OK**].
5. When done, click [**Apply (** ✓ **)**].

Time schedule

You can configure so that an event will occur at a scheduled time regardless of the actual occurrence of the event.

1. From the Setup menu, select the <**Event (** 🔔 **)**> tab.
2. Click <**Time schedule**>.



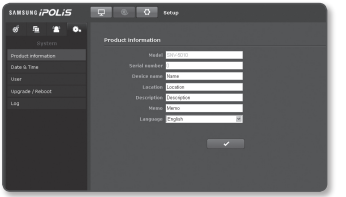
To set the timer event

1. Set <**Timer event setup**> to <**Enable**>.
2. Specify the <**Activation time**>.
   - Always : Always activates in operated mode at the set interval.
   - Only scheduled time : Periodically activates in operated mode at a specified time and date.

3. Specify the <**Transfer interval**>.
4. Specify the activation conditions.
   - FTP sending : Specify the use of the FTP transfer if an event occurs.
5. When done, click [**Apply (** ✓ **)**].

SYSTEM SETUP

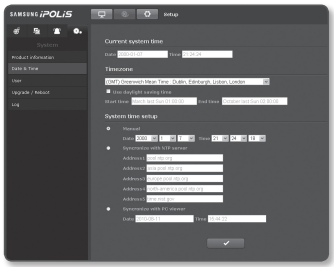
Product Information



1. From the Setup menu, select the <**System (** ⚙ **)**> tab.
2. Click <**Product information**>.
3. Check the camera information, or provide details according to your network environment.
   - Location : Specify the location where the camera is installed.
   - Description : Provide detailed information about the camera location.
   - Memo : Provide an explanation about the camera for better understanding.
   - Language : Select a preferred language for the camera menus and the Web Viewer OSD.
4. When done, click [**Apply (** ✓ **)**].

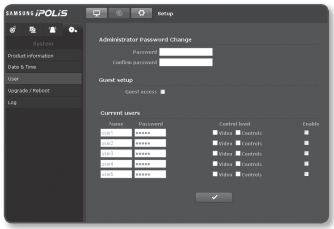
▪ Product related information only allows English for input.

Date & Time



1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**Date & Time**>.
3. Specify the time and date that will be applied to the camera.
   - Current system time : Displays the current time settings of your system.
   - Timezone : Specify the local time zone based on the GMT.
   - Use daylight saving time : If checked, the time will be set one hour before the local time zone for the specified time period.
     This option will be displayed only in areas where DST is applied.
   - System time setup : Specify the time and date that will be applied to your system.
     - Manual : Specify the time manually.
     - Synchronize with NTP server : Sync with the time of the specified server address.
     - Synchronize with PC viewer : Synchronize the time with the connected PC.
4. When done, click [**Apply (** **)**].

User

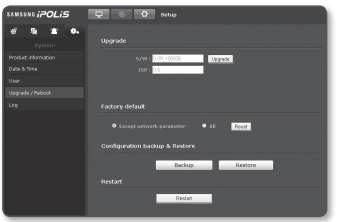


1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**User**>.
3. Provide the necessary user information.
   - Administrator Password Change : Change the current password for the administrator.
   - Guest setup : If <**Guest access**> is permitted, any guest can access the Web Viewer screen but can view only the Live viewer screen.
   - Current users : You can change the user information and adjust the permission level for a user who is set to <**Enable**>.

- Video : You can select a video profile in the Liver viewer screen.
- Controls : You can control camera menu.

4. When done, click [**Apply (** ✓ **)**].

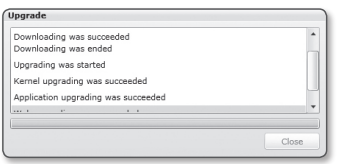
Upgrade/Reboot



1. From the Setup menu, select the <**System (** ⚙ **)**> tab.
2. Click [**Upgrade / Reboot**].
3. Select a desired item and set it appropriately.
   - Upgrade : Performs upgrading the system.
   - Factory default : Resets the system to the factory default.
     - Except network parameter : Reset the other settings except for the interface/ port/DDNS/IP filtering settings.
     - All : Resets all settings including the camera settings. (however, the log information will not be reset)
       - If you reset all settings, the IP address will be defaulted to 192.168.1.100.
   - Configuration backup & Restore : Backs up the current system settings before performing the restoration process.
   - Restart : Restarts the system.

To perform the upgrade

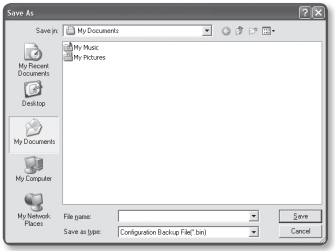
1. Click [**Upgrade**].
2. Click [**Browse**] and specify a file to upgrade.
3. Click [**Send**].
4. The "**Upgrade**" dialog appears where the progression will be shown in the bottom.



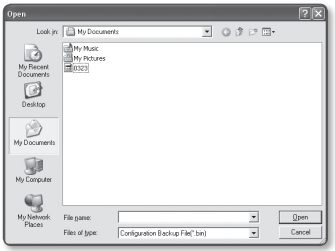
- If you forcibly terminate the upgrade process, upgrade will not be completed properly.

To save the current settings and restore the backup settings

1. Click [**Backup**].
   The Save As dialog should appear.
2. Specify the backup path with a proper file name, and click [**Save**].
   The backup file will be saved to the specified path in the format of "**.bin**".
3. To restore the backup settings, click [**Restore**].

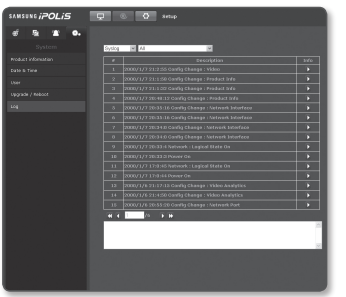


4. Select a backup file and click [**Open**].



Log

You can check the system log or event log.



1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**Log**>.
3. Select a log type.
   - Syslog : You can check the system logs where any system changes are recorded including the time information.
   - Evtlog : You can check the event logs including the time information.
4. From the right log list, select an item to search for.
   - If you select <**All**> in the top left dropdown list, all logs for the applicable log type will be displayed.
5. If one page can not display all the logs available, use the bottom buttons to move to the previous, next, or the last item.

- If you want to view the details of a log, click [**Info (** **)**] in the right column of the log; the log information will be shown in the bottom pane.
- Each page displays 15 logs with the latest one displayed at the top.
- The event/system log list can contain up to 1000 logs; after that, the existing logs will be deleted from the oldest one each time a new log is created.

SPECIFICATION

Items		Description
Video	Imaging Device	1/3" 1.3M PS CMOS
	Total Pixels	1,384(H) x 1,076(V)
	Effective Pixels	1,329(H) x 1,049(V)
	Scanning System	Progressive
	Synchronization	-
	Frequency	-
	Horizontal Resolution	-
	Min. Illumination	Color : 1.0 Lux (F1.8, 50IRE), 0.016 Lux (Sens up 60X)
	S / N Ratio	50dB
	Video Out	DIP connector
Lens	Focal Length (Zoom Ratio)	3mm
	Max. Aperture Ratio	F1.8
	Angular Field of View	H : 91.2°, V : 72.3°
	Min. Object Distance	-
	Focus Cotrol	-
	Zoom Movement Speed	-
	Lens Type	Fixed Iris
	Mount Type	Board Type

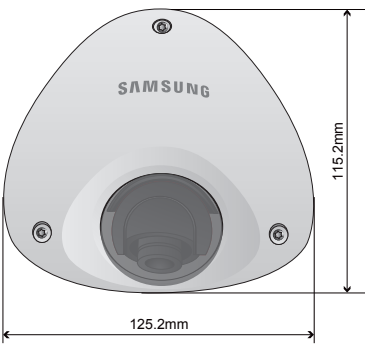
Items		Description
Pan / Tilt / Rotate	Pan Range	-10° ~ 10°
	Pan Speed	-
	Tilt Range	0° ~ 90°
	Tilt Speed	-
	Rotate Range	-
	Preset	-
	Preset Accuracy	-
	Auto Tracking	-
Operational	On Screen Display	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Denish, Portuguese
	Camera Title	Off / On (Displayed up to 15 characters)
	Day & Night	-
	Backlight Compensation	Off / BLC / HLC
	Wide Dynamic Range	-
	Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
	Digital Noise Reduction	SSNRIII (2D+3D Noise Filter) (Off / On)
	Digital Image Stabilization	-
	Motion Detection	-
	Privacy Masking	Off / On (12 programmable zones)
	Sens-up (Frame Integration)	Off / Auto (2X ~ 60X)

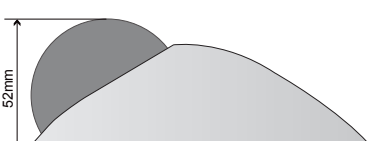
Items		Description
Operational	Gain Control	Off / Low / Medium / High / Manual
	White Balance	ATW / AWC / Manual / Indoor / Outdoor
	Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
	Digital Zoom	-
	Flip / Mirror	Off / On
	Profile	-
	VPS	-
	Intelligent Video Analytics	Scene Change, Virtual Line, Enter / Exit, Appear / Disappear
	PIP	-
	Schedule	-
	Alarm I/O	-
	Remote Control Interface	-
	RS-485 Protocol	-
Network	Ethernet	RJ-45 (10/100BASE-T)
	Video Compression Format	H.264, MPEG4, MJPEG
	Resolution	1280x1024, 1280x720P(HD), 800x600, 640x480, 320x240
	Max. Framerate	22fps (1280x1024), 30fps (720P HD)

Items		Description
Network	Video Quality Adjustment	H.264/MPEG4 : Compression Level, Target Bitrate Level Control MJPEG : Quality Level Control
	Bitrate Control Method	H.264/MPEG4 : CBR or VBR MJPEG : VBR
	Streaming Capability	Multiple Streaming (Up to 10 Profiles)
	Audio I/O	-
	Audio Compression Format	-
	Audio Communication	-
	IP	IPv4, IPv6
	Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS
	Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log
	Streaming Method	Unicast / Multicast
	Max. User Access	10 users at Unicast Mode
	Memory Slot	-
	ONVIF Conformance	Yes
	Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox Google Chrome, Apple Safari
	Central Management Software	NET-i viewer

Items		Description
Environmental	Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / ~ 90% RH
	Ingress Protection	IP66 Grade (Waterproof)
Electrical	Input Voltage / Current	12V DC, PoE(IEEE802.3af)
	Power Consumption	Max. 6W
Mechanical	Color / Material	Body : Ivory / Aluminum
	Dimensions (WxHxD)	W125.2 x H52 x D115.2mm
	Weight	435g

PRODUCT OVERVIEW





TROUBLESHOOTING

PROBLEM	SOLUTION
I can't access the camera from a web browser.	• Check to make sure that the camera's Network settings are appropriate. • Check to make sure that all network cables have been connected properly. • If connected using DHCP, verify that the camera is able to acquire dynamic IP addresses without any problem. • If connected using a DDNS URL, verify that the MAC address has been properly entered. • If the camera is connected to a router, verify that port forwarding is properly configured.
Viewer got disconnected during monitoring.	• Connected Viewers become disconnected upon any change to camera or network configurations. • Check all network connections. • If the camera is connected over an PPPoE network, it' s possible for Viewer to disconnect under poor network conditions.
I cannot connect to the system using a tab browser of Internet Explorer 7.0.	• When you try to connect to the system using a tab browser, the same cookie information is shared, resulting in errors when connected. Therefore, instead of using a tab browser, open a new browser window to connect to the system.
The camera connected to the network is not detected in the IP installer program.	• Turn off the firewall settings on your PC and then search the camera again.
Images overlap.	• Check whether two or more cameras are set to a single multicast address instead of different addresses. If a single address is used for multiple cameras, the images may overlap.
No image appears.	• If the transmission method is set to multicast, check whether there is a router that supports multicast in the LAN the camera is connected to.

PROBLEM	SOLUTION
No JPEG file is transferred via e-mail on occurrence of intelligent video analysis event of camera even when the <IV analysis function> is set to <Enable>.	• Verify the settings in the following sequence: A. Check <Data & Time> settings. B. The <IV analysis function> should be set to <Enable>. C. Alarm Video Transmission must be enabled.
Can <Set Rules> be configured even when the <IV analysis function> is set to <Disable>?	• Yes, it can be. You can set rules for events despite of the intelligent video analysis setting.

OPEN SOURCE ANNOUNCEMENT

Some software components of this product incorporate source code covered under the BSD license as follows.

Component Name	License	License URL
lighttpd 1.4.25	BSD 2.0	http://www.opensource.org/licenses/bsd-license.html
librtp 1.20	BSD 1.0	

lighttpd is a secure, fast, compliant, and very flexible web-server that has been optimized for high-performance environments. It has a very low memory footprint compared to other webservers and takes care of cpu-load. Its advanced feature-set (FastCGI, CGI, Auth, Output-Compression, URL-Rewriting and many more) make lighttpd the perfect webserver-software for every server that suffers load problems.

For more additional information, send email to help.cctv@samsung.com.

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- GPL S/W
  - Base Kernel, Busybox, Sysvinit, dosfstools
- LGPL S/W
  - gLibc, Inetutils

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